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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/025,861	12/26/2001	Shinji Kikuchi	1460.1034	7630

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EXAMINER

DAVIS, CYNTHIA L

ART UNIT PAPER NUMBER

2665

DATE MAILED: 02/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/025,861	Applicant(s) KIKUCHI ET AL.	
	Examiner Cynthia L. Davis	Art Unit 2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 11/28/2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1-8 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klassen in view of Smith.

Regarding claim 1, a communicating unit for communicating via the network according to TCP/IP is disclosed in Klassen, paragraph 52 (disclosing use of IP for communications). An input unit for receiving a parameter which includes at least a server identifier for identifying said server subject to evaluation and a client identifier for identifying said client subject to evaluation or an access point to be used by a client and represents a communication environment to be evaluated is disclosed in paragraphs 52 and 43 (the evaluator is run from the client station, so it knows it's own identifier). A communication controlling unit for controlling communication operation of said communicating unit according to a predetermined procedure, the communication being performed for acquiring a predetermined file from a server is disclosed in paragraph 55.

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A packet transmitting/receiving unit for transmitting/receiving a predetermined control packet to/from a destination identified by an identifier which is specified according to an inputted transmission instruction is disclosed in paragraph 51 (the pings are the control packets). A situation inspecting unit for collecting information about transmitting/receiving conditions of said predetermined control packet transmitted to each destination and of a predetermined control packet returning from each destination in response to the transmitted control packet is disclosed in paragraph 61. A primary transmission instructing unit for inputting, to said packet sending/receiving unit, a transmission instruction to specify the client identifier and an identifier for identifying a branching node as destinations, according to receiving conditions of a data packet or a control packet in said communicating unit is disclosed in paragraph 51 (the user may run the test again with other values based on the results of the previous test). A delay estimating unit for estimating a delay time in transmitting a data packet from said server subject to evaluation to said client subject to evaluation, based on a predetermined delay model and the said information collected by the situation inspecting unit in a course of exchanging said predetermined control packet is disclosed in paragraph 71 (disclosing calculating the propagation delay of the network). A reply controlling unit for emulating an acknowledgement from said client subject to evaluation by adjusting a time instant at which said communicating unit is to transmit an acknowledge packet upon receiving a data packet or a control packet, according to the estimated delay time is disclosed in paragraph 51 (the user may adjust the time between transactions). A performance estimating unit for collecting information about a progress in the

communication of said communicating unit, and estimating communication performance on a communication path between the client and the server based on the collected information is disclosed in paragraphs 56-62. the communication performance measuring equipment being communicable with a client subject to evaluation, included in at least one server, the communication being through a path branching from a path in a branching node which exists on the path between said client and said server subject to evaluation, and the control packet being exchanged between the client and the branching node is missing from Klassen. However, Smith discloses in figure 1, element 12, a traffic monitoring tool on a branching path from the main path between two routers; the traffic between the two routers is what is being evaluated; and in column 1, lines 34-35, using probe packets (control packets) to measure delays in the network. It would have been obvious to one skilled in the art at the time of the invention to use the network configuration of Smith in the system of Klassen. The motivation would be to be able to use various types of traffic monitoring equipment, which may be inserted into the network on a common PC (see Smith, column 7, lines 14-22).

Regarding claim 2, a transmission detecting unit for recording for every destination as transmission time, a time instant at which transmission of said predetermined control packet is detected, the transmission being performed by said packet sending/receiving unit to each destination is disclosed in paragraph 65 (the transmission may be one-way, the time is recorded). A reception detecting unit for detecting reception of a control packet by said packet sending/receiving unit, the control packet returning from each destination as a response to said predetermined control

packet transmitted to each destination, and for recording, for every destination as reception time, a time instant at which the reception is detected is disclosed in paragraph 65. A time informing unit for informing said delay estimating unit of the transmission time and the reception time of each destination; and said delay estimating unit comprises a round-trip time calculating unit for calculating a first round trip time and a second round trip time based on the transmission time and the reception time informed by the time informing unit, the first round trip time being required for said predetermined control packet to reciprocate between the client and the communication performance measuring equipment, the second round trip time being required for said predetermined control packet to reciprocate between the branching node and the communication performance measuring equipment, and a difference estimating unit for estimating, based on the first round trip time, the second round trip time, and the delay model, a difference between a time required to deliver the data packet or a control packet from the server to the communication performance measuring equipment, and a time required to deliver the data packet or the control packet from the server to the client is disclosed in paragraphs 51 and 61 (the performance measuring equipment is located at the client, so the time between those is zero; the total time between the client and server is calculated).

Regarding claim 3, a path information collecting unit for collecting first path information consisting of identifiers for identifying respective nodes existing on the path from the communication performance measuring equipment to the client, and second path information consisting of identifiers for identifying respective nodes existing on the

path from the communication performance measuring equipment to the server; and a branch detecting unit for detecting an identifier for identifying a branching node by comparing the first path information with the second path information, and for inputting the identifier as a part of the parameter is disclosed in paragraph 75 (disclosing a hop count test that may be performed on the path between the client and the server).

Regarding claim 4, a secondary transmission instructing unit for giving an instruction to said packet sending/receiving unit to transmit, to the client, two control packets having a predetermined form and different data lengths from each other is disclosed in paragraph 51 (disclosing use of short and long pings; the pings come back to the client at the end of a round-trip). A round-trip time measuring unit for measuring round trip time of each of the two control packets, the round trip time packet to reception of an acknowledge packet in response to the transmitted control packet, and being a time taken from transmission of the control a coefficient estimating unit for estimating a coefficient associated with a factor which varies depending on the size of a packet to be transmitted, in a predetermined delay model representing data transmission between a branching node and the client, and for inputting the estimated coefficient as a part of the parameter, based on the obtained round trip time of each of the two control packets is disclosed in paragraphs 65 and 80 (disclosing a difference between short and large packet response times, both are calculated).

Regarding claim 5, an offset calculating unit for calculating, based on a predetermined model, a factor of a delay time due to accumulation of data packets when the data packets are transmitted from the server to the client in a burst mode, and

for outputting the resultant as an offset corresponding to the difference obtained by the difference estimating unit; and a difference output unit for adding the offset to the value estimated by the difference estimating unit, and outputting the resultant as an estimated value is disclosed in paragraph 81 (disclosing testing in burst mode) and paragraphs 82-91.

4. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Klassen in view of Smith in further view of Takahara. Said delay estimating unit further comprises a stop decision unit for comparing the calculated offset with a predetermined threshold, and for instructing said reply controlling unit to stop the transmission of the acknowledge packet, according to the comparison result is missing from Klassen. However, Takahara discloses in the abstract comparing the delay in a transmission system with a threshold, and based on the comparison, stopping transmissions. It would have been obvious to one skilled in the art at the time of the invention to stop transmission based on the delay in the system as is calculated in Klassen. The motivation would be to control and optimize the transmission (see Takahara).

5. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klassen Smith in further view of in view of Ramanathan.

Regarding claim 7, a first recording unit for monitoring transmitting/receiving operation of a control packet and a data packet performed by said communicating unit, and recording start time and finish time of each of procedures which are defined in HTTP; and a duration calculating unit for calculating a difference between the start time and the finish time as a duration for each procedure, and for calculating a sum of the

duration of the procedures is missing from Klassen. However, Ramanathan discloses in column 3, lines 14-18, and column 8, line 49, a system that logs start time, end time, and duration information regarding HTTP transfers. It would have been obvious to one skilled in the art at the time of the invention to calculate the duration of HTTP transfers. The motivation would be to evaluated performance of the network (Ramanathan, column 3, lines 21-24).

Regarding claim 8, a second recording unit for monitoring transmitting/receiving operation of a control packet and a data packet performed by said communicating unit, and recording start time and finish time of each of procedures which are defined in FTP; and duration calculating unit for calculating a difference between the start time and the finish time as duration for each procedure and calculating a sum of the duration of the procedures is missing from Klassen. However, Ramanathan discloses in column 3, lines 14-18, and column 4, line 24, a system that logs start time, end time, and duration information regarding FTP transfers. It would have been obvious to one skilled in the art at the time of the invention to calculate the duration of FTP transfers. The motivation would be to evaluated performance of the network (Ramanathan, column 3, lines 21-24).

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia L Davis whose telephone number is (571) 272-3117. The examiner can normally be reached on 8:30 to 6, Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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CLD  
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1/23/06

A handwritten signature in black ink, appearing to read 'Huy D. Vu', with a long horizontal flourish extending to the right.

HUY D. VU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600